LSA Document #02-160

HAZARDOUS WASTE GROUND WATER QUALITY STANDARDS

Second Public Hearing - February 17, 2004

This board packet contains the following materials for the board meeting to consider final adoption of amendments to rules for hazardous waste in 329 IAC 3.1 to implement hazardous waste ground water quality standards:

- Rule Fact Sheet
- Summary/Response to Comments from the First Public Hearing
- Estimate of Economic Impact of the Rule
- Proposed Rule as Preliminarily Adopted
- IDEM's Suggested Changes to Proposed Rule
- Proposed Rule as Preliminarily Adopted with IDEM's Suggested Changes Incorporated

Office of Land Quality
Rules, Planning and Outreach Section





February 2, 2004

Ground Water Quality Standards for Hazardous Waste

LSA Document #02-160

Overview

This rule adds additional ground water quality standards for the hazardous waste management program, as required by IC 13-18-17-5.

Citations Affected

329 IAC 3.1-9-2.

Affected Persons

Owners, operators and permittees of hazardous waste treatment, storage and disposal facilities (TSDF).

Reason(s) for the Rule

This rule will make Indiana's hazardous waste program consistent with Indiana law.

Economic Impact of the Rule

The net economic impact of this rule cannot yet be determined. This rule adds a number of additional constituents to the current lists of constituents for which testing is required. However, the actual number of additional constituents a TSDF could be required to test for will be determined by the department on a case-by-case basis.

Benefits of the Rule

This rule will help the department to ensure that TSDFs do not adversely impact Indiana's ground water resources.

Description of the Rulemaking Project

IC 13-18-17-5 requires the department to incorporate the water pollution control board's new groundwater quality standards in 327 IAC 2-11 in department programs. This rule adds additional ground water quality standards to the hazardous waste management program as follows:

- It adds 18 substances to the 482 contaminants currently included in the ground water monitoring list in 40 CFR 261, Appendix VIII. The additional 51 contaminants in the ground water standards are already listed in Appendix VIII.
- It allows IDEM to consider the overall requirements of the ground water quality standards when deciding to exclude a constituent from a facility permit.
- It amends 40 CFR 264.94, Table 1 to be consistent with the new ground water quality standards.
- It adds 17 contaminants to the 222 constituents currently listed in 40 CFR 264, Appendix IX. The other 52 contaminants in the ground water standards are already listed in Appendix IX.

Scheduled Hearings

First Hearing: October 21, 2003 Second Hearing: February 17, 2004

Consideration of Factors in IC 13-14-8-4

Indiana Code 13-14-8-4 requires that in adopting rules and establishing standards, the board shall take into account the following:

- 1) All existing physical conditions and the character of the area affected.
- 2) Past, present, and probable future uses of the area, including the character of the uses of surrounding areas
 - Zoning classifications.
- 4) The nature of the existing air quality or existing

water quality, as appropriate.

- 5) Technical feasibility, including the quality conditions that could be reasonably be achieved through coordinated control of all factors affecting the
- Economic reasonableness of measuring or
- reducing any particular type of pollution.

 7) The right of all persons to an environment sufficiently uncontaminated as not to be injurious to:
 - (A) human, plant, animal, or aquatic life; or
 - (B) the reasonable enjoyment of life and property.

Consistency with Federal Requirements

This rule is in addition to the federal hazardous waste program at 40 CFR 260 through 40 CFR 279.

Rulemaking Process

The first step in the rulemaking process is a first notice published in the Indiana Register that discusses the issues and opens a first comment period. A second notice is published which contains the draft rule, comments from the first comment period and IDEM's responses. The Solid Waste Management Board holds the first public hearing and public comments are heard. The proposed rule is published in the Indiana Register after preliminary adoption. If the proposed rule is substantively different from the draft rule, a third comment period is required. The board holds the second public hearing and listens to additional public comments. After the board finally adopts the rule, the Attorney General and the Governor must approve the rule. The final rule must be filed with the Secretary of State and published in the Indiana Register. The rule becomes effective 30 days after filing with the Secretary of State.

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SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST PUBLIC HEARING

On October 21, 2003, the solid waste management board (board) conducted the first public hearing/board meeting concerning the development of amendments to 329 IAC 3.1-9-2. No comments were made at the first hearing.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

DATE: April 24, 2003

TO: File

FROM: Steve Mojonnier

SUBJECT: Fiscal Impact of Amendments to Rules for Hazardous Waste Management at 329 IAC 3.1-9-

2 to be Consistent with New Ground Water Quality Standards in 327 IAC 2-11; LSA

Document #02-160

Under IC 4-22-2-28, IDEM has estimated that the economic impact of the proposed amendments to rules for hazardous waste management at 329 IAC 3.1 adding new ground water quality standards as required by IC 13-18-17-5 and 327 IAC 2-11 will be less than five hundred thousand dollars (\$500,000) on the regulated entities. The economic impact analysis for this rule will not be submitted to the Legislative Services Agency.

This rule could require regulated entities to perform testing for up to 19 constituents in addition to the 482 constituents currently listed in 40 CFR 261, Appendix VIII, and up to 17 constituents in addition to the 222 constituents currently listed in 40 CFR 264, Appendix IX. However, no regulated entity will be required to test for all additional constituents. Each hazardous waste treatment, storage and disposal facility (TSDF) must test for a specific list of constituents based on the materials it accepts, if it has experienced a release of hazardous waste. Of all the active and closed TSDFs in Indiana that are required to monitor or test ground water under 40 CFR 264, Subpart F, none has yet been evaluated to determine if monitoring or testing for any of these additional constituents would be appropriate for that facility.

Many of these additional constituents are analyzed using the same methods used for existing constituents. The amount of additional testing required will determine the actual economic impact of the rule. An actual determination of the potential cost of this rule will require us to determine how many of these additional constituents must be monitored for by each TSDF, and what additional testing will be required for each new constituent.

The economic impact of this rule cannot be determined at this time, however we do not believe that the impact could exceed the IC 4-22-2-28 threshold during the statutory life of the rule. We will continue to assess the economic impact of this rule to minimize costs to regulated entities while fulfilling the mandates of the controlling statute and rule.

Attachments

cc: Mr. Timothy Method Mr. Bruce Palin Mr. Michael Dalton

PROPOSED RULE AS PRELIMINARILY ADOPTED

LSA Document #02-160

DIGEST

Amends 329 IAC 3.1-9-2 to be consistent with new ground water quality standards at 327 IAC 2-11. Effective 30 days after filing with the secretary of state.

HISTORY

First Notice of Comment Period: July 1, 2002, Indiana Register (25 IR 3495).

Second Notice of Comment Period: January 1, 2003, Indiana Register (26 IR 1358).

Continuation of Second Notice of Comment Period: July 1, 2003, Indiana Register (26 IR 3428).

Notice of First Public Hearing: September 1, 2003, Indiana Register (26 IR 3903).

Date of First Public Hearing: October 21, 2003.

Proposed Rule and Notice of Second Public Hearing: December 1, 2003, Indiana Register (27 IR 912).

329 IAC 3.1-9-2

SECTION 1. 329 IAC 3.1-9-2, PROPOSED TO BE AMENDED AT 26 IR 1241, IS AMENDED TO READ AS FOLLOWS:

329 IAC 3.1-9-2 Exceptions and additions; final permit standards

Authority: IC 13-14-8; IC 13-22-2-4

Affected: IC 13-14-10; IC 13-22-2; IC 13-30-3; 40 CFR 264

- Sec. 2. Exceptions and additions to federal final permit standards are as follows:
- (1) Delete 40 CFR 264.1(a) dealing with scope of the permit program and substitute the following: The purpose of this rule is to establish minimum standards which define the acceptable management of hazardous waste at final state permitted facilities.
- (2) In 40 CFR 264.4 dealing with imminent hazard action, delete "7003 of RCRA" and insert "IC 13-30-3 and IC 13-14-10".
- (3) Reports to the state required at 40 CFR 264.56(d) shall be communicated immediately to the Office of Land Quality, Department of Environmental Management, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015, (317) 233-7745, or (888) 233-7745 (toll-free in Indiana). In addition to the requirements of this rule, all requirements for spill reporting under 327 IAC 2-6.1 shall be complied with.
- (4) The written spill report required by 40 CFR 264.56(j) must also include information deemed necessary by the commissioner or the commissioner's authorized agent to carry out the purpose and intent of 327 IAC 2-6.1.
- (5) In 40 CFR 264.75 dealing with the biennial report, delete "EPA form 8700-13B" and insert "forms provided by the commissioner".
- (6) In 40 CFR 264.76 dealing with unmanifested waste reports, delete "The unmanifested waste report must be submitted on EPA form 8700-13B".
- (7) In 40 CFR 264.77 regarding additional reports, insert after the first sentence in (c), "Ground water data for laboratory analytical results and field parameters must be submitted as follows:
 - (A) Two (2) paper copies on the most current form prescribed by the commissioner.

- (B) In addition to the paper copies required in clause (A), an electronic report in a format prescribed by the commissioner.
- (d) The commissioner may request other information, as required by Subparts F, K through N, and AA through CC of this part, be submitted in an electronic format as prescribed by the commissioner.".
- (8) In addition to the requirements in 40 CFR 264, Subpart E, the reports required by IC 13-22-4-3.1 must be kept on file for at least three (3) years after submission to the department.
- (9) In 40 CFR 264, subpart F, the term "hazardous constituent" includes the following contaminants:

Contaminant	Chemical Abstracts Service Registry Number
Alachlor	15972-60-8
Asbestos	1332-21-4
Atrazine	1912-24-9
Combined beta/photon emitters	10098-97-2, 10028-17-8
Dalapon	75-99-0
Di(2-ethylhexyl)adipate	103-23-1
cis-1,2-Dichloroethylene	156-59-2
Diquat	85-00-7
Ethylbenzene	100-41-4
Fluoride	16984-48-8
Glyphosate	1071-83-6
Gross alpha particle activity (including Radium 226 but excluding radon and uranium)	12587-46-1
Nitrate (as N)	14797-55-8
Nitrite (as N)	14797-65-0
Picloram	1918-02-1
Radium 226 and 228 (combined)	13982-63-3, 15262-20-1
Simazine	122-34-9
Styrene	100-42-5

(10) In 40 CFR 264.93(b), the commissioner may consider 327 IAC 2-11 in addition to the factors listed.

(11) Delete 40 CFR 264.94(a)(2), Table 1, and substitute the following:

Table 1. Maximum Concentration of Constituents for Groundwater Protection

Constituent	Maximum Concen- tration (mg/L)
Arsenic	0.05
Barium	1.0
Cadmium	0.005
Chromium	0.05
Lead	0.015
Mercury	0.002

Selenium	0.01
Silver	0.05
Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy 1,4,4a,5,6,7,8,9a-octahydro-1, 4-endo, endo-5,8-dimethano naphthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.0002
Methoxychlor (1,1,1-Trichloro-2,2-bis (p-methoxyphenylethane)	0.04
Toxaphene (C ₁₀ H ₁₀ Cl ₆ , Technical chlorinated camphene, 67-69 percent chlorine)	0.003
2,4-D (2,4-Dichlorophenoxyacetic acid)	0.07
2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	0.01

- (12) In 40 CFR 264.94(b), the commissioner may consider 327 IAC 2-11 in addition to the factors listed.
- (13) In 40 CFR 264.99(g), in addition to the constituents listed in 40 CFR 264, Appendix IX, the commissioner may require a facility to monitor for the following contaminants:

Contaminant	Chemical Abstracts Service Registry Number
Alachlor	15972-60-8
Asbestos	1332-21-4
Atrazine	1912-24-9
Combined beta/photon emitters	10098-97-2, 10028-17-8
Dalapon	75-99-0
Di(2-ethylhexyl)adipate	103-23-1
cis-1,2-Dichloroethylene	156-59-2
Diquat	85-00-7
Fluoride	16984-48-8
Glyphosate	1071-83-6
Gross alpha particle activity (including Radium 226 but excluding radon and uranium)	12587-46-1
Nitrate (as N)	14797-55-8
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Picloram	1918-02-1
Radium 226 and 228 (combined)	13982-63-3, 15262-20-1
Simazine	122-34-9
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⁽⁹⁾⁽¹⁴⁾ Delete 40 CFR 264, Subpart H dealing with financial requirements and substitute 329 IAC 3.1-15.

⁽¹⁰⁾⁽¹⁵⁾ Exceptions and additions to the standards for tank systems in 40 CFR 264, Subpart J are under section 3 of this rule.

⁽¹¹⁾⁽¹⁶⁾ In 40 CFR 264.221(e)(2)(i)(C), delete "permits under RCRA Section 3005(c)" and insert "with final state permits".

⁽¹²⁾⁽¹⁷⁾ Delete 40 CFR 264.301(1).

⁽¹³⁾⁽¹⁸⁾ Delete 40 CFR 264, Appendix VI.

⁽¹⁴⁾⁽¹⁹⁾ In 40 CFR 264.316(b), delete "(49 CFR Parts 178 and 179)" and substitute "(49 CFR Part 178)".

⁽¹⁵⁾⁽²⁰⁾ In 40 CFR 264.316(f), delete "fiber drums" and substitute "nonmetal

containers".

(16)(21) Delete 40 CFR 264.555(e)(6).

(22) The requirements in subsections (9) through (13) do not apply to any of the following industries to a greater extent than the standard of conduct established in the related federal regulation or regulatory policy, until July 1, 2005:

Industry Standard Industry Class	ification Code
Steel works, blast furnaces (including coke ovens), and rolling.	3312
Gray and ductile iron foundries	3321
Malleable iron foundries	3322
Steel investment foundries	3324
Steel foundries, not elsewhere classified	3325
Aluminum foundries	3365
Copper foundries	3366
Nonferrous foundries, except aluminum and copper	3369

(Solid Waste Management Board; 329 IAC 3.1-9-2; filed Jan 24, 1992, 2:00 p.m.: 15 IR 935; errata filed Nov 8, 1995, 4:00 p.m.: 19 IR 353; filed Jul 18, 1996, 3:05 p.m.: 19 IR 3356; filed Aug 7, 1996, 5:00 p.m.: 19 IR 3365; filed Jan 9, 1997, 4:00 p.m.: 20 IR 1112; filed Mar 19, 1998, 10:05 a.m.: 21 IR 2741; errata filed Apr 8, 1998, 2:50 p.m.: 21 IR 2989; errata filed Aug 10, 2000, 1:26 p.m.: 23 IR 3091; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535; filed Jan 22, 2001, 9:46 a.m.: 24 IR 1617; errata filed Mar 19, 2001, 10:31 a.m.: 24 IR 2470; filed Apr 5, 2001, 1:29 p.m.: 24 IR 2433; filed Jun 3, 2002, 10:40 a.m.: 25 IR 3112)

IDEM'S SUGGESTED CHANGES TO PROPOSED RULE AS PRELIMINARILY ADOPTED

LSA Document #02-160

Revisions made by LSA under the Administrative Rules Drafting Manual (IC 4-22-8-4(a)(2)) and incorporated into the printed version (LSA Document #02-235, 26 IR 1239) have been made in the version of this rule presented to the board for final adoption. These changes are NOT listed in this list of suggested changes.

Page references are to the rule as preliminarily adopted.

Page 2 329 IAC 3.1-9-2(9)

Delete the proposed language preceding the table and insert the following: "(9) In 40 CFR 264, subpart F, the commissioner will consider the following contaminants in addition to the hazardous constituents listed in 40 CFR 261, Appendix VIII:"

PROPOSED RULE AS PRELIMINARILY ADOPTED WITH IDEM'S SUGGESTED CHANGES INCORPORATED

LSA Document #02-160

DIGEST

Amends 329 IAC 3.1-9-2 to be consistent with new ground water quality standards at 327 IAC 2-11. Effective 30 days after filing with the secretary of state.

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329 IAC 3.1-9-2

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Authority: IC 13-14-8; IC 13-22-2-4

Affected: IC 13-14-10; IC 13-22-2; IC 13-30-3; 40 CFR 264

- Sec. 2. Exceptions and additions to federal final permit standards are as follows:
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 - (A) Two (2) paper copies on the most current form prescribed by the commissioner.
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- (d) The commissioner may request other information, as required by Subparts F, K through N, and AA through CC of this part, be submitted in an electronic format as prescribed by the commissioner.".
- (8) In addition to the requirements in 40 CFR 264, Subpart E, the reports required by IC 13-22-4-3.1 must be kept on file for at least three (3) years after submission to the department.
- (9) In 40 CFR 264, subpart F, the commissioner will consider the following contaminants in addition to the hazardous constituents listed in 40 CFR 261, Appendix VIII:

Chemical Abstracts Service Registry Number
15972-60-8
1332-21-4
1912-24-9
10098-97-2, 10028-17-8
75-99-0
103-23-1
156-59-2
85-00-7
100-41-4
16984-48-8
1071-83-6
12587-46-1
14797-55-8
14797-65-0
1918-02-1
13982-63-3, 15262-20-1
122-34-9
100-42-5

⁽¹⁰⁾ In 40 CFR 264.93(b), the commissioner may consider 327 IAC 2-11 in addition to the factors listed.

(11) Delete 40 CFR 264.94(a)(2), Table 1, and substitute the following:

Table 1. Maximum Concentration of Constituents for Groundwater Protection

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Barium	1.0
Cadmium	0.005
Chromium	0.05
Lead	0.015
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy 1,4,4a,5,6,7,8,9a-octahydro-1, 4-endo, endo-5,8-dimethano naphthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.0002
Methoxychlor (1,1,1-Trichloro-2,2-bis (p-methoxyphenylethane)	0.04
Toxaphene ($C_{10}H_{10}Cl_6$, Technical chlorinated camphene, 67-69 percent chlorine)	0.003
2,4-D (2,4-Dichlorophenoxyacetic acid)	0.07
2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	0.01

⁽¹²⁾ In 40 CFR 264.94(b), the commissioner may consider 327 IAC 2-11 in addition to the factors listed.

⁽¹³⁾ In 40 CFR 264.99(g), in addition to the constituents listed in 40 CFR 264, Appendix IX, the commissioner may require a facility to monitor for the following contaminants:

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Nitrite (as N)	14797-65-0
Picloram	1918-02-1
Radium 226 and 228 (combined)	13982-63-3, 15262-20-1
Simazine	122-34-9

(9)(14) Delete 40 CFR 264, Subpart H dealing with financial requirements and substitute 329 IAC 3.1-15.

(10)(15) Exceptions and additions to the standards for tank systems in 40 CFR 264, Subpart J are under section 3 of this rule.

(11)(16) In 40 CFR 264.221(e)(2)(i)(C), delete "permits under RCRA Section 3005(c)" and insert "with final state permits".

(12)(17) Delete 40 CFR 264.301(1).

(13)(18) Delete 40 CFR 264, Appendix VI.

(14)(19) In 40 CFR 264.316(b), delete "(49 CFR Parts 178 and 179)" and substitute "(49 CFR Part 178)".

(15)(20) In 40 CFR 264.316(f), delete "fiber drums" and substitute "nonmetal containers".

(16)(21) Delete 40 CFR 264.555(e)(6).

(22) The requirements in subsections (9) through (13) do not apply to any of the following industries to a greater extent than the standard of conduct established in the related federal regulation or regulatory policy, until July 1, 2005:

Industry Standard Industry Classi	fication Code
Steel works, blast furnaces (including coke ovens), and rolling	3312
Gray and ductile iron foundries	3321
Malleable iron foundries	3322
Steel investment foundries	3324
Steel foundries, not elsewhere classified	3325
Aluminum foundries	3365
Copper foundries	3366
Nonferrous foundries, except aluminum and copper	3369

(Solid Waste Management Board; 329 IAC 3.1-9-2; filed Jan 24, 1992, 2:00 p.m.: 15 IR 935; errata filed Nov 8, 1995, 4:00 p.m.: 19 IR 353; filed Jul 18, 1996, 3:05 p.m.: 19 IR 3356; filed Aug 7, 1996, 5:00 p.m.: 19 IR 3365; filed Jan 9, 1997, 4:00 p.m.: 20 IR 1112; filed Mar 19, 1998, 10:05 a.m.: 21 IR 2741; errata filed Apr 8, 1998, 2:50 p.m.: 21 IR 2989; errata filed Aug 10, 2000, 1:26 p.m.: 23 IR 3091; readopted filed Jan 10, 2001, 3:25 p.m.: 24 IR 1535; filed Jan 22, 2001, 9:46 a.m.: 24 IR 1617; errata filed Mar 19, 2001, 10:31 a.m.: 24 IR 2470; filed Apr 5, 2001, 1:29 p.m.: 24 IR 2433; filed Jun 3, 2002, 10:40 a.m.: 25 IR 3112)